

# 2000 AREA CONTINGENCY PLAN (ACP)

For the California

**NORTH COAST  
SAN FRANCISCO BAY & DELTA  
CENTRAL COAST**

VOLUME II: Sensitive Sites (Section 9970)



NATIONAL RESPONSE CENTER:  
1-800-424-8802

CALIFORNIA OFFICE OF EMERGENCY SERVICES:  
1-800-852-7550



This Page Intentionally Left Blank

**9970 Sensitive Sites**

**9970.1 Contents:**

<b>9971</b>	<b>Introduction.....</b>	<b>Vol II-iv</b>
	<b>9971.1 How Sites are Rated for Environmental Sensitivity.....</b>	<b>Vol II-v</b>
	<b>9971.2 Site Strategy Verification Form.....</b>	<b>Vol II-viii</b>
<b>9972</b>	<b>North Coast Environmentally Sensitive Sites</b>	
	<b>9972.1 Introduction.....</b>	<b>9972-2</b>
	<b>9972.2 Del Norte Co. Sensitive Sites.....</b>	<b>9972-14</b>
	<b>9972.3 Humboldt Co. Sensitive Sites.....</b>	<b>9972-54</b>
	<b>Humboldt Bay GRP.....</b>	<b>9972-84</b>
	<b>9972.4 Mendocino Co. Sensitive Sites.....</b>	<b>9972-109</b>
<b>9973</b>	<b>San Francisco Bay &amp; Delta Sensitive Sites</b>	
	<b>9973.1 Introduction.....</b>	<b>9973-1</b>
	<b>GRP 1 Coast.....</b>	<b>9973-GRP-1-1</b>
	<b>GRP 2 South SF Bay.....</b>	<b>9973-GRP-2-1</b>
	<b>GRP 3 Anchorage 9.....</b>	<b>9973-GRP-3-1</b>
	<b>GRP 4 Central SF Bay.....</b>	<b>9973-GRP-4-1</b>
	<b>GRP 5 San Pablo Bay.....</b>	<b>9973-GRP-5-1</b>
	<b>GRP 6 Carquinez Strait/Suisun Bay.....</b>	<b>9973-GRP-6-1</b>
	<b>GRP 7 West Delta.....</b>	<b>9973-GRP-7-1</b>
	<b>GRP 8 North Delta.....</b>	<b>9973-GRP-8-1</b>
	<b>GRP 9 South Delta.....</b>	<b>9973-GRP-9-1</b>
	<b>GRP 10 East Delta.....</b>	<b>9973-GRP-10-1</b>
<b>9974</b>	<b>Central Coast Sensitive Sites</b>	
	<b>9974.1 Santa Cruz County.....</b>	<b>9974.1-1</b>
	<b>9974.2 Monterey County.....</b>	<b>9974.2-1</b>
<b>9975</b>	<b>Economically &amp; Culturally Significant Sites</b>	
	<b>9975.1 0 North Coast.....</b>	<b>9975-2</b>
	<b>9975.2 0 San Francisco Bay &amp; Delta.....</b>	<b>9975-40</b>
	<b>9975.3 0 Central Coast.....</b>	<b>9975-126</b>

## **9971 Introduction**

Much of this response section of the Area Contingency Plan has a new look this year. The North Coast and Bay and Delta sections have been extensively revised. This revision was a result of an exhaustive internal review and extensive user feedback. Key features of the revision are:

### **North Coast:**

- Sites are divided into seven response categories depending on the difficulty of the response and the distance from equipment. A summary table at the beginning of Section 9972 provides ready access to this information.
- A second table at the beginning of Section 9972 summarizes the response strategy of every site, for quick reference.
- The Humboldt Bay Geographic Response Plan is now bound with the Sensitive Sites it governs, starting at page 9972-85 in the Humboldt County section.

### **San Francisco Bay & Delta:**

- The San Francisco Bay & Delta is now divided into 10 Geographic Response Plans. These plans are based on natural basins, such as the Central Bay. Each plan contains all the sites in its natural basin. With the old organization by counties, up to five counties had to be searched to put together the sites affected in a single spill. This created confusion at the very beginning of a response, where it is least needed. It also took considerable time.
- Several other decision aids are included at the beginning of each ACP, including:
  - A Resource List Table giving the equipment needed for each site in summary form.
  - A scenario with response priorities for that scenario (Scenarios for some ACPs are yet to be developed.)
  - A table indexing each site, where the IC can prioritize response and track results on a single sheet of paper.
- All these decision aids should considerably speed the response process during its first critical hours, as well as reducing confusion and errors.
- A complete cross index giving the new site number from the old County-based site number may be found in the Introduction to the San Francisco Bay & Delta section.

### **Central Coast:**

The Central Coast plan retains the old format for one more year. An Elkhorn Slough GRP is under development.

### **9971.1 How Sites are rated for Environmental Sensitivity**

While the basic philosophy is to protect the largest number of organisms most sensitive and vulnerable to oiling, it must be noted that all biological communities and organisms are sensitive to the effects of oiling. The different categories simply identify the relative degree of sensitivity. Even shorelines on which specific environmentally sensitive sites have not been identified have resources sensitive to oiling.

The environmental sensitivity of a site is determined by considering the following criteria:

- ◆ Does the site provide habitat for species either listed or candidates for listing as rare, threatened, or endangered under State and/or Federal law?
- ◆ Does the site provide habitat that is of extraordinary biological productivity?
- ◆ Does the site provide habitat that is of extraordinary biological diversity?
- ◆ Does the site provide habitat for organisms that are extremely vulnerable and sensitive to oiling and that is difficult to restore if contaminated by oil?

#### **9971.11 Prioritization**

Using these criteria, the following relative priorities for environmentally sensitive area are established:

##### *Category A- First Priority For Protection*

Wetlands, estuaries, and lagoons with emergent vegetation (includes all Environmental Sensitivity Index (ESI) 10 shorelines (See Table 1)).

Sheltered tidal flats (includes all ESI 9 shorelines)

Habitats of species that are listed or candidates for listing as rare, threatened, or endangered under State and Federal laws.

Sites of significant concentrations of vulnerable and sensitive species, e.g. pinniped pupping and nursery areas during the pupping season.

##### *Category B- Second Priority for Protection*

Major pinniped haulout areas during non-pupping seasons.

Moderate concentrations of vulnerable and sensitive species

Other low energy shorelines not otherwise included by one of the criteria above, including rip-rap in sheltered areas (ESI 6B), exposed tidal flats (ESI 7), sheltered rocky shores (ESI 8A) and sheltered man-made structures (ESI 8B).

### *Category C- Third Priority for Protection*

Higher energy shorelines that are not otherwise included by one of the criteria above including gravel beaches (ESI 6A), mixed sand and gravel beaches (ESI 5), coarse-grained sand to granules beaches (ESI 4), fine to medium-grained sand beaches (ESI 3), exposed wave-cut platforms (ESI 2), exposed seawalls and piers (ESI 1B) and exposed rocky cliffs (ESI 1A).

#### **9971.12 Mapping**

Mapping is complicated by the mobile nature of many of the species considered during an oil spill response. This circumstance highlights the need to immediately involve experts with current knowledge of resources and their distribution, and the need to regard this annex only a guide for first responders without this information.

Resources and sites needing protection are mapped on the series of maps included. Circles are placed on the maps to identify the sites of concern, their relative priority for protection and the seasonality of that concern, if any. A letter on the circle indicates the area's priority for protection, with "A" indicating the first priority for protection and "B" the second priority as discussed above. If the site's priority for protection varies seasonally, the circle will be subdivided, and each subdivision will contain a letter indicating the appropriate protection priority for that season. The months of the year are represented on the face of the circle, with the month of January occurring between the 12 o'clock and 1 o'clock positions, February occurring between the 1 o'clock and the 2 o'clock positions, and so on.

A four-digit number near the circle cross references to an adjoining site summary sheet where information regarding the resources at the location highlighted can be found. Each map is followed by one site summary sheet for each site identified on the preceding map. The site summary sheets provide specific information about the natural resource that causes the site of concern.

#### **9971.13 References**

Nautical charts prepared by the National Oceanic and Atmospheric Administration provide a larger scale helpful in planning for a response to a catastrophic spill involving large areas of coastline or San Francisco Bay and as navigational aids for responders. A study of California's coastal inlets, "Coastal Inlet Protection Strategies for Oil Spill Response", was prepared for the Marine Spill Response Corporation (MSRC) and the California Department of Fish and Game's (CDFG) Office of Oil Spill Prevention and Response (OSPR) and contains detailed maps of the coastal 172 inlets and possible response strategies. The study's discussion and sketches of the proposed response strategies have been incorporated into the specific response strategies for a portion of the environmentally sensitive sites along the California coast. Specific strategies for the remaining coastal sites will be developed during the subsequent reviews of this plan. Copies are available from Research Planning, Inc. of Columbia, South Carolina, or copies may be made from the OSPR originals. Maps of the sensitivity of the shoreline to oiling, the Environmental Sensitivity Index (ESI), are useful in response activities and are incorporated into the Area Contingency Plan by reference. ESI maps are currently available for San Francisco Bay and the southern California coastline from Point Conception to the Mexican border and Channel Islands. These maps are available through Research Planning, Inc. or photocopies of the maps may be made from the OSPR originals. California/Oregon Border are now available. These maps are in the geographic information system (GIS) and also have natural resource and some socioeconomic data available, or for a fee from Research Planning, Inc. or available for copying at OSPR. Relative Risk at a Time of a Spill For the purpose of this task, "risk" is defined as "the likelihood of spilled oil reaching the vicinity of the resources". During an actual oil spill event, the relative likelihood of a resource coming into contact with the oil is a result of the proximity of the spill to the natural resource and the wind, weather, current, and tides at the time of the spill. Consequently, responders to an oil spill should not assume that resources equidistant from the source of a spill are at equal risk from the oil. At a minimum, first responders to a spill in the marine environment must be able to forecast the speed and direction of the spilled oil. This requires responders to have immediate access to real time information about the local weather, tides, and currents to make the base prediction

possible about the movement of the oil away from the scene of the spill. Access to computer software programs that predict the movement of the oil in response to the conditions existing at the time of the spill are the preferred method of determining which resources are most likely to be reached by the oil and therefore at most “risk”. Responders should use computer predictions for periodic intervals over the short term future as soon as possible in the response. For example, predictions would be useful for every four to eight hour increment for the first 36 to 48 hours, with the exact time and interval keyed to the maximum and minimum tides and any significant changes predicted in the wind direction and/or speed and weather. Normally, computer projections are most available to responders at the time of a spill through the National Oceanic and Atmospheric Administrations Scientific Support Coordinator.

#### **9971.14 Prioritization of Environmental and Economic Resources**

Consistent with State and Federal law, the highest priority in oil spill response is the protection of human health and safety. Protection of environmental resources is the second highest priority. Protection of economic resources is the third highest priority. There may be significant situations where both the economic and environmental significance of a site or area would be considered in deciding appropriate response strategies. This consideration would only be necessary if response resources were limited. These considerations must be made at the time of the spill by the Unified Command based on the information available and considerations at the time of the spill.

**TABLE 1**

ESI classifications used for shorelines in the State of California:

<u>ESI Classification</u>	<u>Description</u>
1A	Exposed Rocky Cliffs
1B	Exposed Sea Walls and Piers
2	Exposed Wave-Cut Platforms
3	Fine/Medium-Grained Sandy Beaches
4	Coarse-Grained Sand/Gravel Beaches
5	Mixed Sand and Gravel Beaches
6A	Gravel Beaches
6B	Rip Rap
7	Exposed Tidal Flats
8A	Sheltered Rocky Shores
8B	Sheltered Man-Made Structures
9	Sheltered Tidal Flats
10	Marshes

## 9971.2 ACP RESPONSE STRATEGY VERIFICATION

### A. PRE-DEPLOYMENT INFORMATION

#### I. GENERAL INFORMATION

ACP Site Name: \_\_\_\_\_ ACP Strategy Number: \_\_\_\_\_ -  
Organization Conducting Drill: \_\_\_\_\_ Scheduled Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Time \_\_\_\_  
Point of Contact: \_\_\_\_\_ Phone Number: \_\_\_\_\_

#### II. PURPOSE OF EXERCISE (check one)

- ☐ Test and improve current ACP strategy  
☐ Develop alternate strategies  
☐ Develop a strategy where there is no ACP strategy  
☐ Other

#### III. OBJECTIVE OF STRATEGY

- ☐ Contain and Recover Oil  
☐ Deflect Oil to Deeper Water  
☐ Exclude Oil from Inlet  
☐ Exclude Oil from Shoreline  
☐ Other

#### IV. HOW WILL THE EFFECTIVENESS OF THE STRATEGY BE EVALUATED

- ☐ Rice hulls, ☐ oranges, ☐ sorbent pads, ☐ current meters ☐ Other

#### V. PREFERRED CONDITIONS FOR THE EXERCISE

Tide \_\_\_\_\_ Wind \_\_\_\_\_ Swell \_\_\_\_\_

#### VI. DESCRIPTION OF STRATEGY TO BE DEPLOYED

- ☐ ACP RESPONSE STRATEGY NUMBER(s) \_\_\_\_\_  
☐ Other (Attach description of strategy. Identify equipment and configuration in which it is to be deployed, including kind and amount of boom, configuration in which it is to be deployed, kind of anchors to be used how and where they are to be attached to the boom, and vessels to be used. Provide a plane view sketch or illustrate the location of equipment on a map or chart.)

---

---

---

---

### B. FIELD DEPLOYMENT INFORMATION (complete during equipment deployment)

#### I. ON-SCENE CONDITIONS

Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Time on scene \_\_\_\_\_ Time arrival of equip \_\_\_\_\_ Begin deploy at \_\_\_\_\_ Time done \_\_\_\_\_  
Wind direction \_\_\_\_\_ at Speed \_\_\_\_\_ knots. Air Temperature \_\_\_\_\_ F Water temp \_\_\_\_\_ F .  
Wave ht \_\_\_\_\_ Max current \_\_\_\_\_ dir \_\_\_\_\_. Preceding tide time \_\_\_\_\_ ht \_\_\_\_\_, succeeding tide time \_\_\_\_\_ and ht \_\_\_\_\_

#### II. EQUIPMENT DEPLOYMENT

Boom Descripton: 1. Length \_\_\_\_\_ Size \_\_\_\_\_ Type \_\_\_\_\_  
2. Length \_\_\_\_\_ Size \_\_\_\_\_ Type \_\_\_\_\_  
Anchors: Number \_\_\_\_\_ Size \_\_\_\_\_ Types \_\_\_\_\_  
placement \_\_\_\_\_  
Boats : Boom boats: number \_\_\_\_\_ types \_\_\_\_\_  
Skiffs/boat: number \_\_\_\_\_ types \_\_\_\_\_  
Skimmers: number \_\_\_\_\_ types \_\_\_\_\_  
Personnel : workers \_\_\_\_\_ others \_\_\_\_\_  
Time to complete deployment \_\_\_\_\_ Length of time equipment left in place \_\_\_\_\_ Exposed to both tides \_\_\_\_ (y/n)

#### III. DESCRIBE THE DEPLOYMENT

Provide a plane view sketch or illustrate the location of equipment on a map or chart.  
Show the location of the following items: North, prominent geographic features, ends of boom, anchors, locations where material used to simulate oil collected, places where strategy or equipment failed.

---

---

---

---



**C. Field Deployment Evaluation** ( complete during equipment deployment)

**I. EVALUATION SYNOPSIS** (summarize at end of deployment)

Field Observer \_\_\_\_\_ Organizer \_\_\_\_\_ Phone ( ) - \_\_\_\_\_

Degree of Change necessary for ACP \_\_\_\_\_ Date Change ACP Strategy Revised \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
(1-none, 2-edit, 3-revise amount/size of equipment, 4-minor revision, 5-substantial, 6-major, 7-new strategy needed)

Was entire strategy tested? \_\_\_\_\_(y/n) (Do not include sorbent deployment)

If not, what part? \_\_\_\_\_

Was specified equipment used? \_\_\_\_\_(y/n)

Was strategy adequate? \_\_\_\_\_(y/n) If not, categorize problems below, and provide detail in I-VI.

(Make a table with bi-column as shown below)

**General Nature of Deficiency**

\_\_\_\_\_ Strategy Design  
\_\_\_\_\_ Deployment Deficiency  
\_\_\_\_\_ Overwhelming Conditions  
\_\_\_\_\_ Wrong deploy for conditions/tidal phase  
\_\_\_\_\_ Other  
\_\_\_\_\_ No deficiency

**Specific Types of Failures**

\_\_\_\_\_ Inadequate equipment  
\_\_\_\_\_ Delivery: vehical dragt or others  
\_\_\_\_\_ Improper placement  
\_\_\_\_\_ Inadequate anchorage  
\_\_\_\_\_ Deficient shore closure/attachment  
\_\_\_\_\_ Oil escape through or around  
\_\_\_\_\_ Oil entrains  
\_\_\_\_\_ Oil overtops the boom  
\_\_\_\_\_ Wrong orientation for conditions

**II. RESULTS** ( Describe the effectiveness of the deployment. What criteria were used to evaluate the effectiveness of the equipment and the configuration in which it was deployed. Please discuss any problems experienced including communications, access, and staging areas.)

---

---

---

---

---

---

---

---

**III. RECOMMENDED CHANGES TO THE ACP RESPONSE STRATEGY** ( Describe shortfalls of the ACP, and recommend changes to the ACP response strategy and other sections of the plan.)

---

---

---

---

---

**IV. LESSONS LEARNED MAY APPLY TO OTHER ACP RESPONSE STRATEGIES**

---

---

---

---

---

**PLEASE RETURN THIS FORM TO THE U.S. COAST GUARD MARINE SAFETY OFFICE UPON COMPLETION OF THE EXERCISE. THIS INFORMATION THAT YOU PROVIDE IS VITAL IN DEVELOPING AN EFFECTIVE, REALISTIC OIL SPILL CONTINGENCY PLAN.**

**ADDRESS: PLANNING DIVISION  
USCG MSO SAN FRANCISCO BAY  
COAST GUARD ISLAND BLDG. 14  
ALAMEDA, CA 94501-5100**

**FAX: (510) 437-3885 or  
( 510) 437-3072  
ATTENTION: PLANNING DIVISION**